

REMARKS

Applicants respectfully request favorable reconsideration of the above-captioned application as amended.

By this Amendment, claims 1-30 are presented for examination. Claims 1 and 16 are the independent claims. Favorable reconsideration is respectfully requested.

In the Office Action, claims 6-8 were rejected under 35 U.S.C. §101 as allegedly not being limited to statutory subject matter. Claim 6 recites a signal including the packet formed by the method of claim 1, claim 7 recites a storage device for storing the signal of claim 6, and claim 8 recites a receiver for receiving the signal of claim 6. The Office Action asserted that the invention recited in these claims “is not limited to tangible embodiments (e.g., signal).”

Moreover, the Advisory Action dated January 18, 2006 in response to the Amendment filed November 28, 2005, stated:

“Applicants argued that (1) Signal is tangible, even if it cannot be held in human hands, thus Applicant requests the withdrawal of 101 rejection of claims 6-8. ...

As to point (1), the current guidelines state that signals are not statutory, therefore not patentable. See <http://www.uspto.gov/web/offices/pac/dapp/ogsheet.html> “Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility.””

Applicants respectfully traverse this rejection. The document referred to in the Advisory Action is believed to be the OG Notice of November 22, 2005 (hereinafter the “Guidelines”). Applicants are submitting herewith, as Exhibit A, a complete copy of the Guidelines.

Applicants have carefully reviewed the entire Guidelines, but have found nothing therein that states or implies a claim directed to a signal is not statutory. In particular, the section entitled “(2) “Tangible Result”” appears to be most relevant to the present issue, but again Applicants have found nothing therein that states or implies a claim directed to a signal is not

statutory. If the Examiner is aware of any specific portion of the Guidelines, or any other Official Gazette Notice, that states that a claim directed to a signal is not statutory, he is respectfully requested to specifically identify that portion so that Applicants may review it.

Applicants further respectfully submit that the Examiner's position is not supported by the actual practice of the U.S. Patent and Trademark Office. It is respectfully pointed out that the assignee of the present application has already been issued 8 patents including claims directed generally to a signal or more specifically to a type of signal, as follows:

- (1) U.S. Patent No. 6,351,474 (claim 21, directed to a "signal")
- (2) U.S. Patent No. 6,351,471 (claim 19, directed to a "bandwidth optimized transport stream")
- (3) U.S. Patent No. 6,292,490 (claim 11, directed to a "transport stream")
- (4) U.S. Patent No. 6,246,701 (claim 7, directed to a "remultiplexed transport stream")
- (5) U.S. Patent No. 6,195,368 (claim 16, directed to a "bitstream")
- (6) U.S. Patent No. 6,148,082 (claim 23, directed to a "transport stream")
- (7) U.S. Patent No. 6,111,896 (claim 5, directed to a "bitstream")
- (8) U.S. Patent No. 6,064,676 (claim 13, directed to a "transport stream")

Moreover, patents have been granted after the publication of the Guidelines to other assignees including claims directed to a signal, for example:

- (9) U.S. Patent No. 7,038,732 (claim 7, directed to a "an electromagnetic wave signal")

Moreover, Applicants again point out the case of Ex parte Lundgren, 76 U.S.P.Q.2d 1385 (BPAI 2005) (a copy of which was attached to the Amendment of November 28, 2005 as Exhibit A), which removed previously applied limitations on the required "tangibility" of certain claims.

Applicants further respectfully point out that the signal recited in Applicants claims is

clearly a man-made signal, not one occurring in nature.

In view of all of the above, Applicants respectfully submit that claims 6-8 recite statutory subject matter, and the Examiner is respectfully requested to withdraw this rejection.

In the Office Action, claims 1, 2, 6-11, 15-17, 21-26 and 30 were rejected as being obvious over U.S. Patent 6,738,639 to Gossselin in view of U.S. Patent No. 6,553,002 to Bremer et al. Claims 3-5 and 18-20 were rejected over Gosselin and Bremer et al. further in view of U.S. Patent No. 5,999,179 to Kekic et al. Claims 12-14 and 27-29 were rejected as being obvious over Gosselin and Bremer et al. in view of U.S. Patent No. 6,628,610 to Wacławsky et al.

Applicants respectfully traverse these rejections. Applicants have amended independent claims 1 and 16 to more expressly describe a feature that was already present in these claims, and submit that amended independent claims 1 and 16, together with the remaining claims respectively dependent thereon, are patentably distinct from the cited prior art for the following reasons.

Applicants will not repeat herein the arguments presented in the Amendment of November 28, 2005, with which the Examiner is familiar, but will instead address the arguments presented in the Advisory Action in response to Applicants' Amendment.

Point (2) of the Advisory Action is directed to Applicants' discussion of the disclosure of Gosselin. The Examiner comments as follows:

“As to point (2), Examiner will address the limitations argued not to be found in Gosselin. Gosselin teaches of the source receiving a specification to send a message to a group of nodes including a given node, where this specification designates the particular group (Col 7, lines 24-29. Sends message identifying the desired multicast group address. Col 6, lines 48-50, “multicast group address is not a physical address that identifies a particular base station.”); then the source transmits a packet with an address corresponding to the given node, but not the other nodes, of the particular group (Col 9, lines 46-50. MSC sends command to the host address associated with the base station.).

The given node in the group of nodes is inherent because in the plurality of nodes, any node may be considered as the given node since the given node is not defined, as the claim 1 merely states, “if each node of the particular group has a return path to the source, then, for each given node of the particular group.” Furthermore, Gosselin teaches of sending a message with the address associated with the base station, and not the group address. Therefore, the message is send only to the node and not the other nodes.”

As a first point, Applicants believe that the above analysis is overlooking an express recitation in claim 1 (with the same recitation appearing in claim 16). Specifically, claim 1 recites in step (a) that the groups of nodes includes “a particular group of two or more nodes,” and then recites in step (c) that (if each node of the particular group has a return path to the source) “for *each* given node of the particular group,” steps (d) and (e) of transmitting a packet and waiting to receive a response packet are performed. Therefore, because the “particular group” includes at least two nodes (e.g., nodes A and B), then at least *two* packets are sent out, one containing the address corresponding to node A and the other containing the address corresponding to node B. Thus, claims 1 and 16 are *not* directed to the case wherein a single packet is transmitted to a single node; rather, the transmitting process is performed iteratively over all the nodes in the particular group.

Therefore, independent claims 1 and 16 recite a “given node” merely to provide antecedent basis for which node is being referred to and which nodes are the “other nodes.” In the example above, where the particular node group includes nodes A and B, if the “given node” is chosen to be node A, then node B is the “other nodes.” If the “given node” is chosen to be node B, then the “other nodes” is node A.

Consequently, when claims 1 and 16 recite transmitting “a packet containing a network layer header, including an address corresponding to the given node, but not the other nodes, of the particular group,” this means that if the given node is node A, then the packet contains the

address corresponding to node A, but **not** the address corresponding to node B. If the given node is node B, then the packet contains the address corresponding to node B, but **not** the address corresponding to node A. Accordingly, it is important to note, as discussed further below, this means that, in the claim terminology, the address corresponding to the given node, in the packet, is a distinct address that is different from any address corresponding to any other node of the particular group. This is true for each of the at least two packets respectively addressed to the at least two nodes of the particular group.

Secondly, the Examiner's comments include citations to different portions of the specification of Gosselin which are **not** all directed to the same embodiment. As the Examiner will recall, Gosselin discloses both a *Unicast* communication scheme and a *Multicast* communication scheme to be used when the Unicast communication scheme is inefficient (col. 5, lines 53-63). In Gosselin's Unicast communication scheme, each base station 30 is given its own physical host address that uniquely identifies that base station (col. 5, lines 18-22). The MSC 50 communicates with a particular base station 30 by sending out a message containing that base station's home address, i.e., a *unicast* addresss (col. 5, lines 22-25).

In contrast, Gosselin's Multicast communication scheme arranges the base stations 30 into multicast groups, after which the MSC 50 can send a single multicast message to all members of a multicast group using the multicast address (col. 7, lines 20-29).

The first citation to Gosselin in point (2) of the Advisory Action (Col. 7, lines 24-29) refers to the Multicast scheme, wherein the MSC 50 can send messages to the multicast group by specifying "the desired multicast group address as the destination address (Col. 7, lines 28-29). The second citation (Col. 6, lines 48-50) merely defines the multicast group address.

However, the third citation (Col. 9, lines 46-50) refers to the method of Fig. 5, which is a method that first uses a Unicast message to address a single device 40 associated with a particular base station 30, and then, if unsuccessful, follows this up with another attempt to reach device 40 using a Multicast message to the multicast group including base 30 (col. 9, line 38-col. 10, line 2). More specifically, in response to an incoming call addressed to device 40, the MSC 50 sends a first paging command with just the address of base 30 (i.e., a unicast address). *See* col. 9, lines 46-51; Fig. 5, Step 520. If there is no response (Fig. 5, step 530), then the MSC 50 sends a second paging command to the multicast group associated with the Location Area of base 30 (i.e., a multicast address). *See* col. 9, lines 60-65; Fig. 5, step 540. If there is no response, (Fig. 5, step 550), then the MSC 50 sends a third paging command to the multicast group associated with the Service Area of base 30 (i.e., another multicast address). *See* col. 9, line 65-col. 10, line 2; Fig. 5, step 560.

Applicants respectfully note that the method of Fig. 5 is almost the opposite of the invention recited in Applicants' claims 1 and 16. In Gosselin's Fig. 5, after a unicast address fails to contact device 40, a broader multicast address is used to try to contact the group including device 40. The purpose is always simply to contact device 40, but the method of Fig. 5 just tries to do this in three successive ways. There is no teaching or suggestion that the multicast operations of steps 540 and 560 in Fig. 5 use a unicast address, i.e., "an address corresponding to the given node, but not the other nodes, of the particular group," as recited in Applicants' claims.

In contrast, in independent claims 1 and 16, after the source receives a specification designating a group, but not specifying any particular node of the group (and if all nodes have a return path), the source transmits a packet to one of the two nodes (e.g., node A) containing the

address corresponding to node A, but **not** containing the address corresponding to the other node of the group (i.e., node B), and then the source transmits another packet to the other one of the two nodes (i.e., node B) containing the address corresponding to node B, but **not** containing the address corresponding to the other node of the group (i.e., node A).

Thus, the Examiner's argument in point (2) of the Advisory Action does not demonstrate that the recitations of claims 1 and 16 are taught or suggested by Gosselin.

With regard to points (3) and (4), Applicants respectfully refer the Examiner to the discussion in the Amendment of November 28, 2005, but notes that that discussion was intended only to explain the environments in which Gosselin and the present invention operated.

Finally, with regard to point (5) in the Advisory Action, the Examiner first states:

“As to point (5), Gosselin teaches of communicating a message to a group of nodes by a manager node receiving of a group and transmitting one unique copy of the message in unicast to each member of the group (Col. 7, lines 24-29).”

As shown above, the cited section of Col. 7, lines 24-29 describes multicast addressing, and contains no teaching or suggestion of what the Examiner describes as “transmitting one unique copy of the message in unicast to each member of the group.” More significantly, with regard to the language of claims 1 and 16, the cited section of Col. 7, lines 24-29 contains no teaching or suggestion of “for each node of the group ... transmitting ... a packet ... including an address corresponding to the given node ... that is different from any address corresponding to any other node of the particular group,” i.e., transmitting one packet to each node of the group, each packet having a unicast address that is different and specific to the respective node to which it is sent.

With regard to point (5), the Examiner continues:

“Gosselin teaches of addressing a group of nodes by a single address the multicast address. The address does not identify a particular base station, but only the group of nodes. The MSC transmits a message to the multicast group address, and the group of nodes receives the message. Since only a single message was sent via the multicast group address, the message was therefore copied and distributed to the members of the group of nodes in the group to receive the message.”

Applicants agree with this description of Gosselin’s multicast communication scheme.

The Examiner concludes his discussion of point (5) as follows:

“Furthermore, there is no explicit limitation of “transmitting one unique copy of the messages”. [*Applicants believe that the Examiner is here referring to Applicants’ claims*]. The claim [1] only states, “receiving a specification at a source to send a set of one or more messages from the source to the particular group of nodes, the specification designating the particular group and not specifying any particular node of the particular group,” and “transmitting from the source a packet containing ...[*an address*] corresponding to the given node, but not the other nodes ... one or more messages of the set”.”

As is immediately apparent, a first packet that contains the address corresponding to node A, but **not** the address corresponding to node B, is distinct from a second packet that contains the address corresponding to node B, but **not** the address corresponding to node A. Thus, the first and second packets are *not exactly identical copies*, but rather have distinctly different addresses, and do **not** correspond to Gosselin’s multicast communication scheme in which, as the Examiner admits in the previous quote from point (5) of the Advisory Action, *copies* of the “message” are made and sent out to the members of the group.

In order to emphasize this distinction between the disclosure of Gosselin and independent claims 1 and 16, Applicants have now amended parts (d) of each of independent claims 1 and 16 to recite “wherein the address corresponding to the given node, in the packet, is a distinct address that is different from any address corresponding to any other node of the particular group.”

Applicants have further clarified the final paragraph of each of claims 1 and 16 to recite

“wherein an operator can specify a given list of messages for execution by an entire group of the nodes by reference to an indication of the group, instead of separately specifying each individual node of that group at the time of specifying the given list of messages to be executed.”

Applicants believe that these recitations merely make explicit what was provided by the claim language before amendment.

The other references cited in the Office Action are each directed to a form of unicast messaging. However, Applicants have not found any teaching or suggestion therein that would remedy the above-noted deficiencies of Gosselin as a reference against the present claims.

In view of the above amendments and remarks, Applicants respectfully submit that claims 1-30 herein are patentably distinguished from the cited prior art.

Applicants respectfully submit that this application is now in condition for allowance. Accordingly, the Examiner is respectfully requested to allow claims 1-30 and to pass this case to issue.

If any fee is due for this filing, please charge the LARGE ENTITY fee therefor to Deposit Account No. 16-2500 of the undersigned.

Applicants' undersigned attorney may be reached by telephone at (212) 969-3314 or by facsimile at (212) 969-2900. Please direct all correspondence to Customer No. 21890 at the address provided below.

Respectfully submitted

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